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A case of cloacal impaction in a cockatiel (*Nymphicus Hollandicus*)

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Abstract

Cloacal impaction is an important gastrointestinal and cloacal disorder in pet birds characterized by the accumulation of faecal material, urates, or foreign debris within the cloaca, resulting in obstruction and difficulty in defecation. Psittacine birds are commonly affected due to poor diet, dehydration, reproductive disorders, and inadequate husbandry, and severe cases may progress to cloacal prolapse or systemic illness if untreated. This case report investigates the cause of mortality in a Cockatiel (*Nymphicus hollandicus*) due to cloacal impaction. A three-year-old cockatiel was presented to the Avian and Exotic Pet Unit at Madras Veterinary College, Chennai, Tamil Nadu with a history of absent droppings, straining during defecation, cloacal swelling, lethargy, decreased appetite, tail bobbing, and decreased vocalisation for four days. Clinical examination revealed depression, dehydration, reduced body condition, and a distended or swollen cloacal region. The bird exhibited straining, tail bobbing, and discomfort during handling. On palpation, a firm impacted mass was felt within the cloaca or caudal coelomic cavity. Feathers around the vent were stained with faecal material. Mild sign of respiratory distress due to abdominal pressure was also noted. The bird was diagnosed with cloacal impaction on confirmation with clinical examination, radiography, ultrasonography and was treated accordingly. The bird collapsed after 15 days of treatment and post mortem findings confirmed it as cloacal impaction.

Keywords: Cloacal impaction, cockatiel, psittacine birds, *Klebsiella* spp.

1. Introduction

Cloacal impaction is an important gastrointestinal and cloacal disorder in pet birds characterized by the accumulation of faecal material, urates, or foreign debris within the cloaca, resulting in obstruction and difficulty in defecation. Psittacine pet birds are commonly affected due to poor diet, dehydration, reproductive disorders, and inadequate husbandry, and severe cases may progress to cloacal prolapse or systemic illness if untreated (Doneley, 2016; Rupley, 1999) [3, 6]. The cloaca is a complex anatomical structure in birds that plays a vital role in the storage and elimination of digestive, reproductive, and urinary wastes. Owing to its structural complexity and close association with multiple organ systems, maintaining cloacal health is essential for the overall well-being of avian patients. The avian cloaca is a trilaminar chamber comprising the coprodeum, urodeum, and proctodeum, which receive contents from the intestinal, urinary, and reproductive tracts. It also houses the bursa of fabricius, an important immune organ in juvenile birds (Taylor, 2016) [7]. Although various cloacal disorders have been reported in avian species, cloacolith formation remains relatively uncommon and poorly documented, with limited reports available (AZA, 2013) [1].

Case history

A three-year-old cockatiel was presented to the Avian and Exotic Pet Unit at Madras Veterinary College, Chennai, Tamil Nadu with a history of absent droppings, straining during defecation, cloacal swelling, lethargy, decreased appetite, tail bobbing, and decreased vocalisation for four days. In clinical examinations, reveal depression, dehydration, reduced body condition, and a distended or swollen cloacal region (Fig. 1b). The bird often exhibited

straining, tail bobbing, and discomfort during handling. On palpation, a firm impacted mass was felt within the cloaca or caudal coelomic cavity. Feathers around the vent were stained with faecal material (Fig. 1a). Mild signs of respiratory distress due to abdominal pressure were also noted.



Fig 1: Ventral portion of the bird showing feathers around the vent were soiled with fecal material (a), Lateral position of the bird showing a distended or swollen cloacal region (b)

2. Materials and Methods

2.1 Clinical Management

Initially the bird was diagnosed for peritonitis and treated with antibiotics syrup Amoxicillin potassium clavulanate @125mg/kg b.wt. bid (Carpenter, 2018) [2], drops Zipvit @ 0.1 ml (multivitamin syrup) in drinking water and powder GutHi (probiotics), 0.5 scoop mixed with lukewarm water to make a pasty consistency, was advised to be administered orally for 21 days.

2.2 Diagnosis

After five days the bird was presented with no improvement and then it was subjected for radiography and ultrasonography. Both radiographic (fig. 2 a, b) and ultrasonographic examination revealed soft tissue swelling in the ventral abdomen.

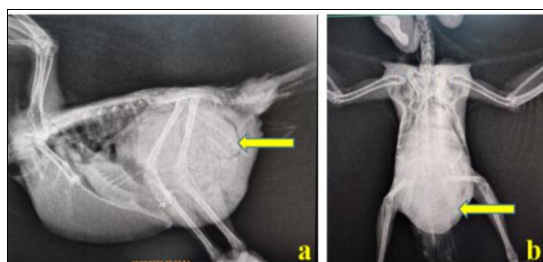


Fig 2: Radiographic impression of both lateral view (a) and ventral view (b) showing soft tissue swelling in the ventral abdomen (arrow)

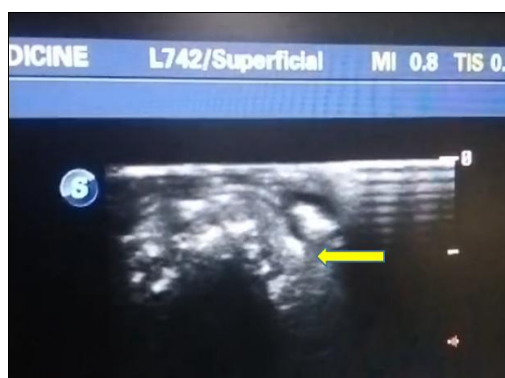


Fig 3: Ultrasonographic examination revealed a distended cloaca containing hyperechoic area (arrow)

The bird was administered with sol. Lactulose 2 drops bid orally so as to improve defecation. On ninth day the bird was brought to the ward with dullness, depression, increased swelling in the ventral abdomen with no improvement. On the eleventh day, torticollis was noticed and the bird became laterally recumbent. The bird was then given fluids inj. Ringers' lactate @10 mL per kg B.wt. along with inj. Tribivet 0.1 ml (multivitamin) SC. The bird died on thirteenth day unfortunately.

2.3 Postmortem examination

The post-mortem examination revealed prominent keel bone (fig. 4). Diffuse dark red areas were observed in breast muscle. The skin in the abdominal region revealed mild green post-mortem discolouration and swelling. On palpation of the swelling in the abdominal area, a mass was detected. Cloacal opening was soiled with scanty white material. On opening the carcass, the organs within the abdominal cavity were found adhered to each other. After separation of the abdominal organs, the caecal portion of the large intestine appeared enlarged, measuring approximately 2–3 cm in diameter. On incision, greenish, dry, solid digested feed material was observed (fig.5 arrow). Diffuse areas of mucosal congestion were noted in the large intestine. A cloacal swab was collected and subjected to bacteriological culture.

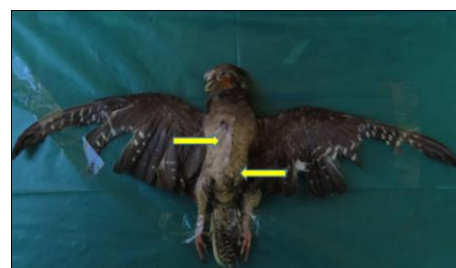


Fig 4: Gross examination of bird revealed prominent keel bone. Diffuse dark red areas in breast muscle

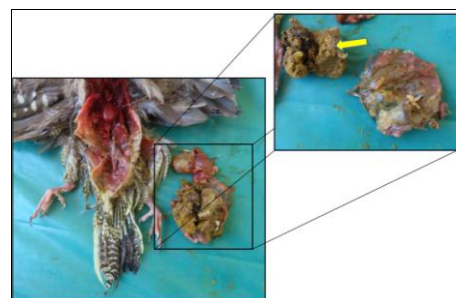


Fig 5: Impaction with greenish, dry, solid digested feed material

2.4 Bacterial Isolation and Identification

The cloacal swab was enriched in BHI broth overnight at 37°C and streaked on to MacConkey agar and Nutrient agar medium and incubated at 37°C for 24–48 h. The pure culture was characterised by Gram staining, catalase and oxidase and IMViC test to identify the organism obtained. In MacConkey agar typical mucoid pink coloured colonies were obtained and it was purified and subjected to Gram staining and biochemical tests. In Gram staining the organism appeared short and thick rods with no particular arrangement characteristics. The isolate exhibited oxidase test negative, catalase test positive typical IMViC test i.e. indole test - negative, Methyl Red (MR) test – negative, Voges-Proskauer (VP) and citrate tests positive confirm the genus identity. Based on the cultural, morphological, and biochemical characteristics, the isolate was identified as *Klebsiella* spp.



Fig 6: Cultural and morphological characteristics of the isolate: (a) MacConkey agar, (b) Nutrient agar, and (c) Gram staining

3. Discussion

Members of the order Psittaciformes are susceptible to a wide range of infectious, nutritional, and management-related disorders. Similar to many avian species, psittacine birds often mask clinical signs of illness until the disease reaches an advanced stage, an adaptive survival mechanism that reduces predation on weak or debilitated individuals (Girling, 2004) [5]. Consequently, conditions affecting the gastrointestinal and cloacal regions may remain unnoticed until severe obstruction or systemic compromise develops.

In the present case, radiographic examination revealed increased soft tissue opacity in the caudal coelomic cavity, consistent with findings previously reported in a black-legged seriema (*Chunga burmeisteri*) affected with cloacal impaction and cloacolith formation. Such radiographic changes are considered useful indicators of cloacal obstruction and associated accumulation of impacted material within the cloaca.

Initially, the present case was suspected as cloacal neoplasia. However, the condition was later differentially diagnosed as cloacal impaction due to the absence of clinical signs commonly associated with cloacitis, such as malodorous feces and tenesmus (Girling, 2004) [5]. Differential diagnoses for cloacal impaction in cockatiels include cloacal prolapse associated with cloacitis, cloacoliths, dehydration, and severe gastrointestinal obstruction. Reproductive disorders including dystocia, egg binding, post-oviposition prolapse, and partial oviduct prolapse should also be considered, particularly in older or overweight female birds. In addition, cystic ovarian disease and excessive sexual behaviour in solitary psittacine birds may predispose to cloacal prolapse and related complications.

Bacteriological examination in the present case revealed the presence of *Klebsiella* species. *Klebsiella* is recognized as an important opportunistic pathogen in pet birds and is known for its antimicrobial resistance characteristics, which may complicate therapeutic management (Vitale, 2025) [8]. Although *Klebsiella* species can be associated with secondary infections and inflammatory conditions, they may also occur as part of the normal gastrointestinal flora in birds. Therefore, their detection in cloacal samples should be interpreted cautiously and correlated with clinical and pathological findings.

Dietary and husbandry factors are considered major predisposing causes of cloacal impaction in cockatiels and other companion birds. According to Fahey (2004) [4], diets deficient in moisture and fiber, particularly exclusive seed-based feeding practices, may result in dehydration and formation of dry, compact fecal material within the cloaca. Nutritional deficiencies, especially hypovitaminosis A, can contribute to epithelial alterations and impaired cloacal health. Furthermore, ingestion of indigestible materials, oversized food particles, or excessive grit may promote obstruction and subsequent impaction. Inadequate water intake combined with poor nutritional management likely played an important role

in the development of cloacal impaction in the present case.

4. Conclusion

The present case highlights cloacal impaction as an important gastrointestinal and cloacal disorder in cockatiels that may mimic other conditions such as cloacal neoplasia or reproductive disorders. A combination of clinical examination, radiography, cytology, bacteriological analysis, and histopathology was useful in establishing the diagnosis and understanding the associated inflammatory changes. Poor dietary management, dehydration, and secondary opportunistic bacterial infection are considered important contributing factors in this case. Early diagnosis and appropriate management are essential to prevent severe complications and improve the prognosis in affected psittacine birds.

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Conflict of Interest

Not available

Financial Support

Not available

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